

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-16 (Canceled).

Claim 17 (New): A sliding door, comprising:

a cam guide;

at least one shutter;

a clamp configured to be fixed to said at least one shutter;

a pair of first carriages; and

a pair of second carriages, said second carriages being supported and guided by a rail, which is realized by a profile, wherein the profile is placed along a length of an opening which is to be opened and closed by said sliding door, for translating said second carriages along said opening;

wherein said clamp is configured to link said at least one shutter to said pair of first carriages,

each one of said first carriages is translatable longitudinally along its respective one of said second carriages and is translatable relatively to the other of said first carriages, and

said cam guide comprises grooves into each of which a roller of said first carriages respectively can engage such that each roller is movable longitudinally and transversally to said rail.

Claim 18 (New): A sliding door according to claim 17, wherein for longitudinal translation of the first carriages along tracks of their respective longitudinal second carriages, said shutter is translatable transversally with respect to the axis of the rail, which is orientated longitudinally to the opening to be closed and opened.

Claim 19 (New): A sliding door according to claim 17, wherein said shutter is linked to the pair of first carriages by one or more clamps, which bring the at least one shutter for accomplishing movement resulting from the longitudinal translation of the second carriages along the rail matched with the transversal movement of the first carriages as an effect of their respective engagement with the grooves.

Claim 20 (New): A sliding door according to claim 19, wherein each one of said first carriages includes rollers or another sliding system, for being translatable along the tracks of said second carriages which respectively include a pulley for sliding along the rail for support and the translation of the at least one shutter.

Claim 21 (New): A sliding door according to claim 20, wherein one of said first carriages is placed laterally to said at least one shutter, so that its guide roller can be housed and can slide to bended ends of a long groove of said grooves of the guide cam.

Claim 22 (New): A sliding door according to claim 20, wherein one of said first carriages is placed on the center line of a longitudinal side of the at least one shutter, so that its guide roller can be housed and can slide to bended ends of a short groove of said grooves of the guide cam.

Claim 23 (New): A sliding door according to claim 17, wherein one of said first carriages is placed respectively on an outer edge and the other one on the center line of an upper side of the at least one shutter, said first carriages being steadily linked to the at least one shutter by one or more clamps.

Claim 24 (New): A sliding door according to claim 17, wherein one of said first carriages is placed on the outer edge and the other one on the center line of a lower side of the at least one shutter by one or more clamps.

Claim 25 (New): A sliding door according to claim 19, wherein the second carriages include a pulley and with a sliding wheel that slides on a track of the supporting profile, the profile including a shoulder for acting together with the support and guide of the at least one shutter during the translation along the rail.

Claim 26 (New): A sliding door according to claim 20, wherein one of the pulleys of the second carriages includes a flaring wide enough to rotate on the rail even when they are lightly tilted with respect to the axis of the same rail.

Claim 27 (New): Sliding door according to claim 20, wherein one of the second carriages includes a stop wheel acting as a shoulder on the track of the supporting profile, to assure linearity of the translation of the at least one shutter, also in case of pushes or uneven thrusts.

Claim 28 (New): A sliding door according to claim 17, where combining a device is combined for the leading and control of the wide opening of the at least one shutter to be opened or to be closed for the respective overlapping and coplanarity, with a guide device placed on the opposite of a longitudinal side, said opposite guide device being fundamentally provided for a better distribution of the stress in phase of inclination or partial hinging of the

moving at least one shutter as an effect of the different position of the first carriages during their translation into the respective bended portions of the guide cam.

Claim 29 (New): A sliding door according to claim 28, wherein an elbow-shaped transmission shaft is linked to a section of the profile for the support of the second carriages, by interposition of a roller that slides on the sides of an opening of the section, said elbow-shaped shaft being steadily fixed to the shutter by supports, and an opposite extremity of the shaft being adjusted to slide inside an opening of a guide which is placed on a side opposite where the carriages and little carriage system are located.

Claim 30 (New): A sliding door according to claim 28, wherein an elbow-shaped transmission shaft has its upper extremity engaged in the opening of the supporting profile, the upper pulley and the roller of the first carriage being linked to a ceiling of the opening, the opposite extremity of the shaft being engaged in a linear guide placed on bottom of the opening.

Claim 31 (New): A sliding door according to claim 28, wherein the linear guide being linked to the bottom is formed by a guide cam being identical and parallel to the guide cam of the ceiling, requiring only a lower pivot for the sliding of the at least one shutter without having to apply to the elbow-shaped shaft.

Claim 32 (New): A sliding door according to claim 24, wherein a guide cam is provided with the ceiling of the opening that implies the at least one shutter to be guided and controlled by the first carriages with the second carriages being supported by clamps placed on the lower side of the same at least one shutter.